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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/369,360	08/06/1999	HEIKO HOLZHEUER	P99.1523	6693

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PATENT DEPARTMENT
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EXAMINER

HAILU, TADESSE

ART UNIT	PAPER NUMBER
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2173

DATE MAILED: 11/20/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/369,360

Applicant(s)
Heiko Holzheuer

Examiner
Tadesse Hailu

Art Unit
2173

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Oct 7, 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Art Unit: 2173

DETAILED ACTION

1. This Office Action is in response to the Response/RCE request entered 10/7/2002 for the patent application (09/369,360) filed on 5 August 1999.

Priority

2. Priority claimed to Germany Patent 199 10 357.7 dated 9 March 1999

Status of the claims

3. Claims 1-17 are pending.

Claim Rejections - 35 U.S.C. § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 7 and 15 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The following limitation "...starting document is inversely related to said measure of similarity" is not shown anywhere in the specification.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2173

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pirolli et al (5,895,470) in view of Hoppe et al (5,515,488).**

The present invention is directed to navigating and searching document. Similarly, Pirolli et al.(5,895,470) discloses a system for categorizing documents in a linked collection of documents. Hoppe et al ("Hoppe"), one of the prior art of records, is also directed to graphical visualization of a database search.

Regarding to **claim 1**: as in the present claimed invention, Pirolli discloses a computer system comprising a processor, a pointing device and a graphic display (Fig. 14). Pirolli also discloses a software tool or browser (col 6, lines 4-26) which enables a user to traverse through and view documents residing on the Web. Pirolli also identifies and categorizes document according their similarities related to the focus document or starting document (see Abstract, col 10, lines 17-29); also shown in Fig. 7, an asymptotic pattern activation over nodes or symbols are illustrated or characterized by graph bars 704 contained in the nodes at activated network 703, thus, the characteristic given to said node defines the degree of predicted relevance of web pages to the starting set of focus web pages (col 10, lines 17-29). Moreover, Pirolli clearly discloses measure of similarity of a staring document to a plurality of other documents using a dot product method (see Fig. 4, col 7, lines 49-63, and elsewhere).

Art Unit: 2173

While Pirolli discloses a graphical display program (web browser), but the visualization aspect or in claim language “display respective symbols of said other documents” is not explicitly shown. However, Hoppe discloses graphical visualization of ionic representations of a search result including each icon having its own characteristic. As shown in Fig. 6, Hoppe discloses a history window displaying the search history tree of FIG. 3, also discloses ionic representation of documents satisfying a corresponding search expression (see Hoppe: col 6, lines 37-col 11, lines 27). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to incorporate the visualization, the displaying of ionic representation technique with Pirolli because the visualization technique could be used to provide an interactive overview of web localities that facilitates navigation as suggested by Pirolli (see col 12, starting from lines 47, *visualizations*). The method **claim 10** recites steps performed by the apparatus or device of claim 1 and therefore is rejected under the same rationale.

Regarding **claim 2**, Pirolli in view of Hoppe discloses a storage area which holds characteristic vectors that produce the similarity measurements (col 6, lines 4-26), wherein, techniques from information retrieval can be applied to calculate a text similarity matrix which represents the inter-document text similarities among Web pages (col 6, lines 36-col 7, lines 66). The method **claim 11** recites steps performed by the apparatus of claim 2 and therefore is rejected under the same rationale.

Art Unit: 2173

Regarding **claim 3**, Pirolli in view of Hoppe further discloses a plurality of characteristic vectors (col 7, lines 11-63). The method **claim 12** recites steps performed by the apparatus of claim 3 and therefore is rejected under the same rationale.

Regarding **claim 4**, Pirolli in view of Hoppe discloses measuring similarity by a weights function over the frequencies of words that are common in the document, entries in the vector for a document indicate the presence or frequency of a word in the document (col 7, lines 49-63, col 9, lines 37-49, col 11, lines 58-col 12, lines 9, col 12, lines 37-46). The method **claim 13** recites steps performed by the apparatus of claim 4 and therefore is rejected under the same rationale.

Regarding **claims 5 and 6**, as shown in Figs. 10-11, Pirolli in view of Hoppe discloses a text similarity network and corresponding matrix representation (see Fig. 4, col 7, lines 49-63, and elsewhere). Pirolli in view of Hoppe also indicates that said graphical representation can be shown in color (col 12, lines 37-46).. The method **claim 14** recites steps performed by the apparatus of claims 5 and 6 and therefore is rejected under the same rationale.

Regarding **claim 7**, Pirolli in view of Hoppe discloses the relative arrangement of graphical representation of various pages 1001-1007 according to their text similarity, that is inter-document similarity of pages (see FIGS. 4, 10-11). Furthermore, as described above, Pirolli in view of Hoppe describes a dot product method as a similarity measure (Fig. 4, col 7, lines 49-63). The method **claim 15** recites steps performed by the apparatus of claim 7 and therefore is rejected under the same rationale.

Art Unit: 2173

Regarding **claims 8 and 9**, Pirolli in view of Hoppe also discloses manipulating the graphical representation using a mouse pointer to generate selection of words wherein said focus document is determined by the higher frequency of said selection of words within said documents (see Hoppe: col 6, lines 37-col 11, lines 27). The method **claims 16 and 17** recite steps performed by the apparatus of claims 8 and 9 respectively and therefore is rejected under the same rationale.

Response to Arguments

8. Applicant's arguments filed 10/7/2002 have been fully considered but they are not persuasive.

Applicant states that the claimed "...starting document is inversely related to said measure of similarity" is implicitly disclosed in the specification, and as the same time, the applicant is indicating that "an inverse function" is a function well known in the art. In contrast, the examiner still insists the claimed subject matter should be explicitly disclosed in the specification as indicated by a quotation of the first paragraph of 35 U.S.C. 112. Since the applicant did not explicitly (i.e., full, clear, concise, and exact terms) disclose, the US 112 (enablement) rejection still applied to claims 7, and 15.

Applicant also argues that "Pirolli does not anticipate the present invention because its strength associations are displayed in the links between documents and not within the documents themselves. In contrast to applicant's argument, Pirolli use a dot product method for similarity measure between two nodes. As shown in Fig. 14, the illustrated bar contained in each nodes

Art Unit: 2173

defines the degree of predictive relevance of web pages to the starting set of focus web pages (see Fig. 4, 14, col 7, lines 49-63, col 10, lines 17-29). Thus, the strength is associated within each nodes. Regarding the display aspect of the claimed subject matter. Although Pirolli does not explicitly describe the display aspect or the present invention, but Pirolli suggests that his system can use a visualization techniques, as suggested in the reference. Having fully addressed the Applicant's arguments, the rejection still stands.

Conclusion

9. The prior art made of record on form PTO-892 and not relied upon is considered pertinent to applicant's disclosure. Applicant is required under 37 C.F.R § 1.111© to considered this reference fully when responding to this action. Heckerman et al (6,216,134), the documents cited therein relates generally to user interfaces and, more specifically, to user interfaces for visualization of categories of data. Heckerman in his Abstract discloses the following:

A system that provides for the graphic visualization of the categories of a collection of records. The graphic visualization is referred to as "category graph." The system optionally displays the category graph as a "similarity graph" or a "hierarchical map." When displaying a category graph, the system displays a graphic representation of each category. The system displays the category graph as a similarity graph or a hierarchical map in a way that visually illustrates the similarity between categories. The display of a category graph allows a data analyst to better understand the similarity and dissimilarity between categories. A similarity graph includes a node for each category and an arc connecting nodes representing categories whose similarity is above a threshold. A hierarchical map is a tree structure that includes a node for each base category along with nodes representing combinations of similar categories (see Abstract).

Art Unit: 2173

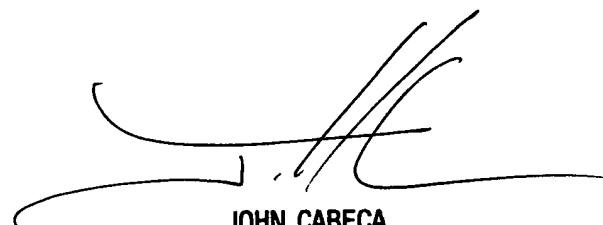
Thus, as shown in Abstract and in the drawings, such as 2A, 2C-4, the prior art reads over the present claimed invention.

10. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to *Tadesse Hailu*, whose telephone number is (703) 306-2799. The Examiner can normally be reached on M-F from 10:00 - 7:30 ET. If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, *John Cabeca*, can be reached at (703) 308-3116 Art Unit 2173 CPK 2-4A51

10. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Tadesse Hailu

11/11/2002



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